Summary Table of the Draft 2013 BMP Stormwater BMPs

BMP Group	Specific BMP	Soils [1]	Water Table Separation	Depth to Bedrock/ Shallow Soils	Contrib. Drainage Area (Ac.)	Max. Site Slope[2]	Hydraulic Head (Ft.)	Karst Geology or a Sinkhole	Cold Climate (cf Table 8.5)
Runoff Volume Reduction	Rooftop Disconnection	Join with additional runoff reduction practice on C-D soils	2 feet	2 feet	Maximum 1,000 sq. ft. to each roof discharge point	1-2%	1 foot	Preferred	Frozen ground may hinder disposal of water
	Sheet flow to Vegetated Filter or Conserved Open Space	Any soil except fill; best to use w/ compost amendments on C-D soils	2 feet	2 feet	3 maximum	6% for conserved open space; 8% for grass filter strip	1 to 2 feet	Preferred	No concerns or needed adaptations
	Soil Compost Amendments	HSG B-D soils	1.5 feet	1.5 feet	Contrib. Impervious area should not exceed area of amended soil	10%	1 foot	OK	OK, except for areas used for snow storage
	Vegetated Roof	NA	NA	NA	NA	NA	1 to 2 feet	Preferred	Plan for snow loading and hardy veg. cover
	Rainwater Harvesting	NA	Below-grade tanks must be above water table	Below-grade tanks must be above bedrock	Rooftop (only) area draining to the tank	NA	Varies with purpose and design	Preferred	Locate indoors or under-ground; others should be operated season-ally
Swales & Open Channels	Grass Channel	Must achieve additional res. time (min. 10 minutes) if C-D soils	2 feet	2 feet	5 maximum	2-4%	2 to 3 feet	OK [3]	OK
	Dry Swale	Made Soil; must use underdrain if on C-D soils	2 feet	2 feet	5 maximum	4%	3 to 5 feet	Preferred [3]	Medium benefit & limitation

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Filtering Systems	Filtering Practice	NA	2 feet	2 feet	5 maximum[4]; 0.5 to 2 preferred	NA	2 to 10 feet	Preferred, but must use impermeable liner	OK if place below frost line and use pre-treatment; Chlorides will move through untreated
	Bioretention 1 (with underdrain)	Made Soil	2 feet	2 feet	5 maximum [4]; 0.5 to 2 preferred	1-5%	4 to 5 feet	OK, but must use under-drain and impermeable liner	OK; use salt-tolerant veg. and pre-treatment; Chlorides will move through untreated
Infiltration Practices	Permeable Pavement 1	Must use underdrain on C-D soils	2 feet	2 feet	Ratio of contrib. pavement area to Permeable Pavement area may not exceed 2:1	1-3%	2 to 4 feet	Large-scale or Level 2 Prohibited; Small-scale OK; must have liner and under-drain; extensive pre-treatment required	Limited; Use special design features; Active mgmt needed to prevent infiltration of chlorides and soluble toxics
	Permeable Pavement 2	Minimum measured f_c > 0.5 inch/hour							
	Infiltration	Minimum measured f_c > 0.5 inch/hour			< 2, and close to 100% impervious	0-5%	2 to 4 feet		
	Urban Bioretention	NA	2 feet	2 feet	5 maximum [4]; 0.5 to 2 preferred	1-5%	4 to 5 feet	Preferred	OK; use salt-tolerant veg. and pre-treatment; Chlorides will move through untreated

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	Bioretention 2 (Bioinfiltration, with no underdrain)	Made Soil; use underdrain if C or D [3] base soils	3 feet	2 feet	5 maximum[4]; 0.5 to 2 preferred	1-5%	4 to 5 feet	Not Recommended, esp. large scale; extensive pre-treatment required	OK; use salt-tolerant veg. and pretreatment; Chlorides will move through untreated
Basins	Wet Swale	Best on HSG C or D soils	Below water table	2 feet below bottom of swale	5 maximum	2% thru swale	2 feet	Not Recommended	Medium benefit & limitation
	Constructed Wetland	HSG-A or B soils may require liner	Below water table if no hotspot or aquifer present; otherwise, a 2 foot separation	2 feet below bottom of wetland	25 minimum [6]	NA	2 to 4 feet	OK; use impermeable liner; limit depth; geotechnical tests needed; max. ponding depth	OK; use salt-tolerant vegeta-tion
	Wet Pond	HSG-A or B soils may require liner	Below water table if no hotspot or aquifer present; otherwise, a 2 foot separation	2 feet below bottom of wetland	25 minimum [5]	NA	6 to 8 feet	Not Recommended [6]	OK; limit depth to avoid stratification; adapt outlet structure
	Extended Detention 1	HSG-A or B soils may require liner	2 feet	2 feet	< 10	NA	6 to 10 feet	Not Recommended [6]	OK
	Extended Detention 2				> 10				
Manufactured	Hydrodymanic	NA	Varies with	Varies with	?	NA	?	OK	?

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Treatment Devices	Devices		device; Must have clearance below bottom of device	device; Must have clearance below bottom of device					
	Filtration Devices	NA			?	NA	?	OK	?
	Storage Devices	NA			?	NA	?	Must have liner and under-drain; Significant pre-treatment required	?

KEY: OK = not restricted; WT = water table; PT = pretreatment; f_c = soil permeability

[1] USDA-NRCS Hydrologic Soil Groups (HSGs)

[2] Refers to post-construction slope across the location of the practice

[3] Denotes a required limit, other elements are planning level guidance and may vary somewhat, depending on site conditions

[4] Drainage area can be larger in some instances.

[5] 10 acres may be feasible if ground water is intercepted and/or if water balance calculations indicate a wet pool can be sustained, and an anti-clogging device must be installed

[6] If detention is used, then an impermeable liner must be placed at the bottom of the basin and geotechnical tests should be conducted to determine the maximum allowable depth